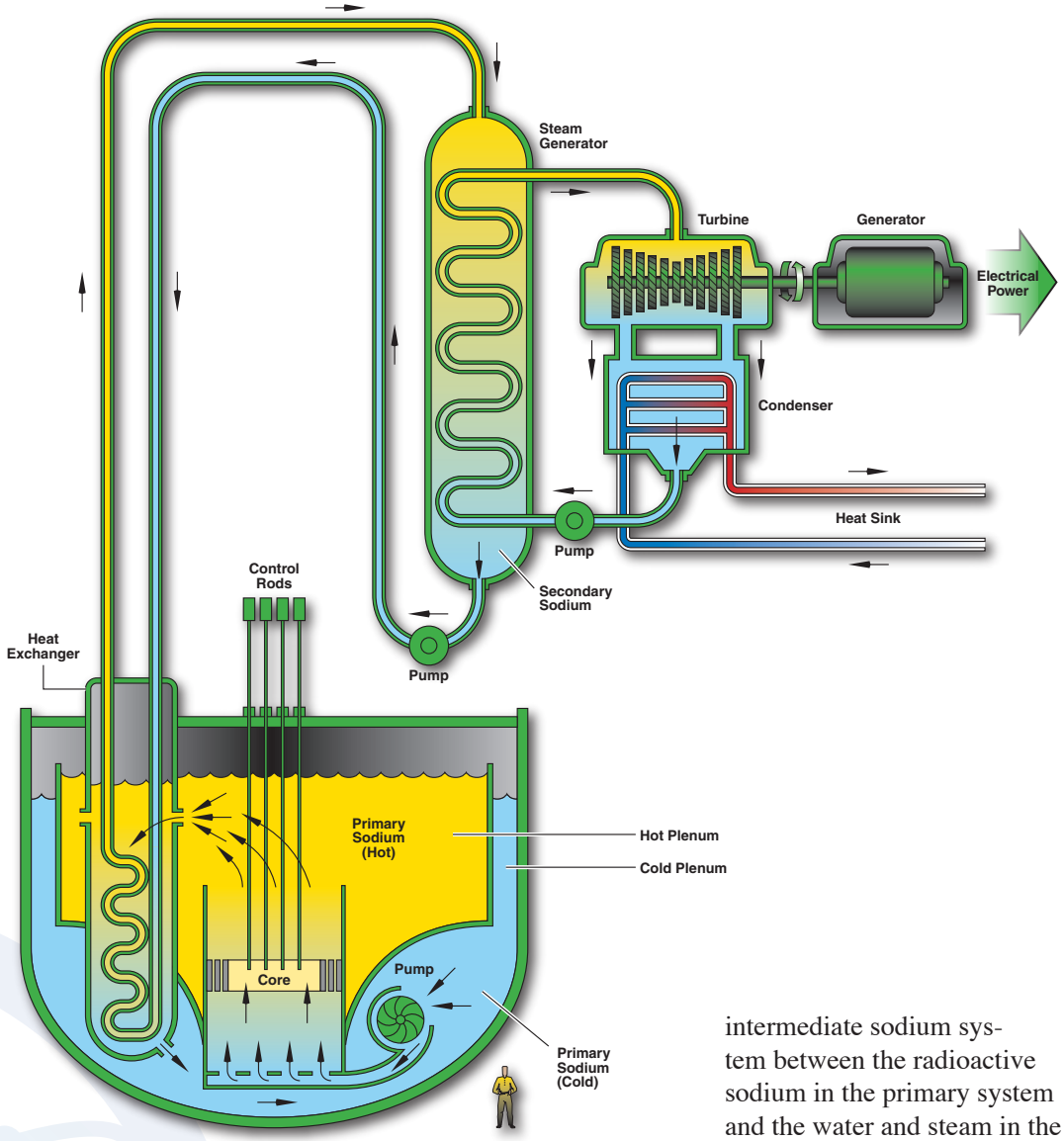
Sodium-Cooled Fast Reactor (SFR)

The SFR is designed for management of high-level wastes and, in particular, management of plutonium and other actinides.



The Sodium-Cooled Fast Reactor (SFR) system features a fast-spectrum, sodium-cooled reactor and a closed fuel cycle for efficient management of actinides and conversion of fertile uranium. The SFR is designed for management of high-level wastes and, in particular, management of plutonium and other actinides. Important safety features of the system include a long thermal response time, a large margin to coolant boiling, a primary system that operates near atmospheric pressure, and an intermediate sodium system between the radioactive sodium in the primary system and the water and steam in the power plant. With innovations to reduce capital cost, the SFR can serve markets for electricity. The SFR's fast spectrum also makes it possible to use available fissile and fertile materials (including depleted uranium) considerably more efficiently than thermal spectrum reactors with once-through fuel cycles.

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08-GA50044-20-R1 R6-11